

GP-300439

**AUTOMATED SYSTEM AND METHOD FOR
AUTOMOTIVE TIME-BASED AUDIO VERIFICATION**

ABSTRACT OF THE DISCLOSURE

A time-based audio verification system used to verify the correct installation of an audio system in a vehicle is based on the principle that the distances between a pick-up microphone and each speaker within the vehicle

5 are different. Sound travels at a constant rate, and the wave is measured that provides the time it takes the sound emanating from each speaker to travel to the microphone. Once it is determined where in the wave each speaker is located, the presence of each speaker in the vehicle can be determined.

Additionally, the level of each speaker in the curve can be analyzed to

10 determine individual speaker output quality.

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